

What is claimed is:

1. A C-terminally truncated porcine CAR or a fragment or variant thereof which mediates adenoviral transduction.
2. A C-terminally truncated porcine CAR according to claim 1 which is disclosed in SEQ ID NO: 2 or a fragment or variant thereof which mediates adenoviral transduction.
3. A DNA sequence which encodes a C-terminally truncated porcine CAR according to claim 1.
4. A DNA sequence which encodes a C-terminally truncated porcine CAR according to claim 2.
5. A plasmid or vector construct that comprises a DNA molecule which expresses a porcine CAR or a fragment or variant thereof which mediates adenoviral transduction.
6. A plasmid or vector construct that comprises a DNA which expresses a C-terminally truncated porcine CAR according to claim 1.
7. A plasmid or vector construct that comprises a DNA which expresses a C-terminally truncated porcine CAR according to claim 2.
8. Host cells into which a vector according to claim 5 has been introduced.
9. Host cells into which a vector according to claim 6 has been introduced.
10. Host cells into which a vector according to claim 7 has been introduced.
11. A method for generating transgenic rodents expressing or overexpressing porcine CAR comprising the steps of:
 - (a) introducing a vector construct of claim 5 into an embryonic stem cell line;
 - (b) selecting cells in which the introduced porcine gene has integrated; and
 - (c) producing chimaeras which as chimaeric embryo may be implanted into a suitable pseudopregnant female foster animal and brought to term.

12. A method of generating transgenic pigs overexpressing porcine CAR comprising the steps of:

- (a) introducing a vector construct of claim 5 into a non-quiescent differentiated pig cell or differentiated pig cell nucleus;
- (b) inserting said non-quiescent differentiated pig cell or non-quiescent differentiated pig cell nucleus into an enucleated pig oocyte, under conditions suitable for the formation of a nuclear transfer (NT) unit;
- (c) activating the resultant NT unit;
- (d) transferring said activated NT unit to a host pig such that the NT unit develops into a fetus; and optionally
- (e) developing the fetus to an offspring.

13. A transgenic rodent obtained using the method according to claim 11.

14. A transgenic pig obtained using the method according to claim 12.

15. A method to test adenoviral transduction of an adenoviral gene delivery vector in a rodent animal model comprising the steps of:

- (a) removing organs, tissues or cells of transgenic rodents according to claim 13;
- (b) transducing *in vitro* said organs, tissues or cells with said adenoviral gene delivery vector;
- (b) transplanting said transduced organs, tissues or cells into the rodent animal model; and
- (d) assessing expression of the gene in said rodent animal model.

16. A method for generating transgenic rodents expressing or overexpressing porcine CAR comprising the steps of:

- (a) introducing a vector construct of claim 6 into an embryonic stem cell line;
- (b) selecting cells in which the introduced porcine gene has integrated; and
- (c) producing chimaeras which as chimaeric embryo may be implanted into a suitable pseudopregnant female foster animal and brought to term.

17. A method for generating transgenic rodents expressing or overexpressing porcine CAR comprising the steps of:

- (a) introducing a vector construct of claim 7 into an embryonic stem cell line;
- (b) selecting cells in which the introduced porcine gene has integrated; and

TOP SECRET - DEFENCE

(c) producing chimaeras which as chimaeric embryo may be implanted into a suitable pseudopregnant female foster animal and brought to term.

18. A method of generating transgenic pigs overexpressing porcine CAR comprising the steps of:

- (a) introducing a vector construct of claim 6 into a non-quiescent differentiated pig cell or differentiated pig cell nucleus;
- (b) inserting said non-quiescent differentiated pig cell or non-quiescent differentiated pig cell nucleus into an enucleated pig oocyte, under conditions suitable for the formation of a nuclear transfer (NT) unit;
- (c) activating the resultant NT unit;
- (d) transferring said activated NT unit to a host pig such that the NT unit develops into a fetus; and optionally
- (e) developing the fetus to an offspring.

19. A method of generating transgenic pigs overexpressing porcine CAR comprising the steps of:

- (a) introducing a vector construct of claim 7 into a non-quiescent differentiated pig cell or differentiated pig cell nucleus;
- (b) inserting said non-quiescent differentiated pig cell or non-quiescent differentiated pig cell nucleus into an enucleated pig oocyte, under conditions suitable for the formation of a nuclear transfer (NT) unit;
- (c) activating the resultant NT unit;
- (d) transferring said activated NT unit to a host pig such that the NT unit develops into a fetus; and optionally
- (e) developing the fetus to an offspring.

20. A transgenic rodent obtained using the method according to claim 16.

21. A transgenic rodent obtained using the method according to claim 17.

22. A transgenic pig obtained using the method according to claim 18.

23. A transgenic pig obtained using the method according to claim 19.

24. A method to test adenoviral transduction of an adenoviral gene delivery vector in a rodent animal model comprising the steps of:

- (a) removing organ, tissues or cells of transgenic rodents according to claim 20;
 - (b) transducing in vitro said organs, tissues or cells with said adenoviral gene delivery vector;
 - (c) transplanting said transduced organs, tissues or cells into the rodent animal model; and
 - (d) assessing expression of the gene in said rodent animal model.
25. A method to test adenoviral transduction of an adenoviral gene delivery vector in a rodent animal model comprising the steps of:
- (a) removing organ, tissues or cells of transgenic rodents according to claim 21;
 - (b) transducing in vitro said organs, tissues or cells with said adenoviral gene delivery vector;
 - (c) transplanting said transduced organs, tissues or cells into the rodent animal model; and
 - (d) assessing expression of the gene in said rodent animal model.

TRANSDUCING ADENOVIRAL GENE DELIVERY VECTOR